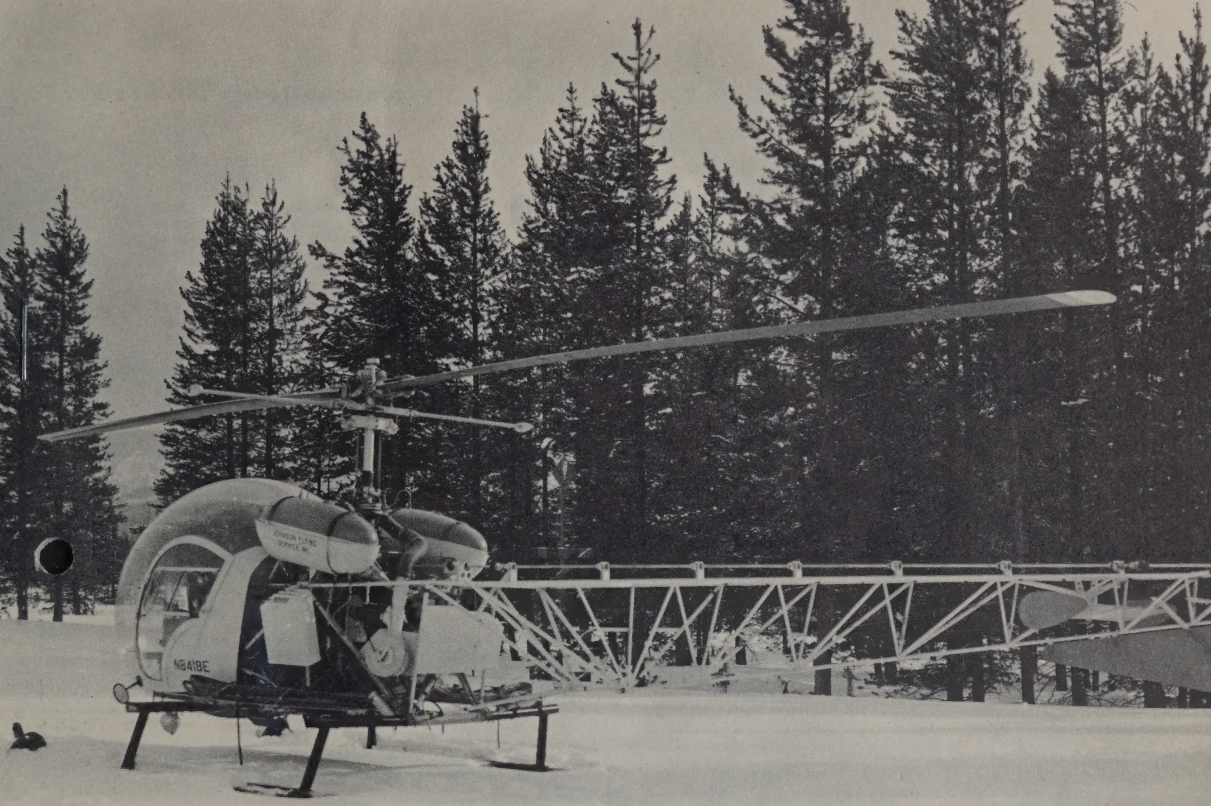

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
MONTANA

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE,
and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.

AS OF
MAY 1, 1965

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Soil Conservation Service, 511 N.W. Broadway - Room 507, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN.15 - APR.1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

REPORTS	ISSUED	AGENCY
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

Report Prepared

By

Phillip E. Farnes
Snow Survey Supervisor

and

Stanley E. Cook
Assistant Snow Survey Supervisor

Snow Survey and Water Supply Forecasting Branch
Soil Conservation Service
Box 855
Bozeman, Montana

Issued By

H. D. Hurd
State Conservationist
Soil Conservation Service
Bozeman, Montana

J. A. Asleson, Director
Montana Agricultural
Experiment Station
Bozeman, Montana

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MONTANA
WATER SUPPLY OUTLOOK
as of
May 1, 1965

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* * * * * * * * * * * * * * * * * * * * * * * * * *
*                                                 *
* The outlook for irrigation and domestic water   *
* supplies is good to excellent. High elevation   *
* snow still contains near record amounts of      *
* water. Melt is occurring at low and median      *
* elevations. Late season streamflow is expected  *
* to hold up well through the summer months.      *
*                                                 *
* Streamflow for the next five months is forecast *
* at about 20 to 40 percent above average. Spring *
* runoff is not expected to cause much damage     *
* unless warm heavy rains occur during the main   *
* snow melt period. Generally, reservoir levels   *
* have been lowered to help reduce peak flows.    *
*                                                 *
* * * * * * * * * * * * * * * * * * * * * * * * * *
```

West of the divide, snow cover averages about the same as a year ago and is about 20 to 30 percent above average except on the Kootenai where it is near average. High elevation snow continues to increase or remain at about the same water content as a month ago. The snow is very dense and on many snow courses two inches of snow contains about one inch of water.

East of the divide, snow cover is 10 to 40 percent greater than a year ago and 40 to 80 percent above average on the Missouri and Yellowstone headwaters. The headwater area of the Marias and Sun Rivers along the Continental Divide has a snow pack that is about 10 percent above average and about the same as a year ago. Along the main stem of the Missouri River, from Toston to Fort Benton, tributary streams have a snow cover about 5 percent less than a year ago and about 40 percent above average. All high elevation snow courses continue to show a dense snow pack.

Runoff during April was a little above average on the Kootenai River, about 15 to 25 percent above average on Flathead River tributaries, and 35 to 65 percent above average on the Bitterroot, Upper Clark Fork and Blackfoot drainages. Runoff for the next five months is forecast to be near average on the Kootenai River and its tributaries in Montana, 15 to 25 percent above average on the Flathead River tributaries, and 25 to 30 percent above average on the Upper Clark Fork drainages.

MONTANA
WATER SUPPLY OUTLOOK
as of
May 1, 1965

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East of the divide, runoff during April was near average from the higher elevation tributaries. Above average flows occurred on the Jefferson and Marias Rivers tributaries. The Milk River above Fresno Reservoir produced about two and one-half times its average runoff in April.

Runoff for the next five months is forecast to be 20 to 40 percent above average on headwaters of the Missouri River except runoff near 50 percent above average is expected on the Red Rock River. Tributaries to the Missouri River originating along the Continental Divide are forecast 15 to 20 percent above average. Streams originating in the Crazy, Belt, Castle and Snowy Mountains in central Montana are expected to produce 35 to 50 percent above average runoff. Below average runoff is forecast for the Milk River. However, reservoirs were filled during the April runoff and diversions from the St. Mary River should satisfy irrigation requirements. The Yellowstone River and its tributaries originating in the Absarokee and Beartooth Mountains are forecast 20 to 35 percent above average. Natural runoff from the Big Horn River in Wyoming is forecast about 40 percent above average, but reservoirs have been drawn down to control spring runoff and streamflow below reservoirs may not indicate the high runoff.

High water during spring runoff is not expected to cause much damage unless warm heavy rains occur during the main snow melt period. The heavy high elevation snow is not seen as a great flood threat. High elevation runoff can add to peak flows but is normally not a major factor. Usually, severe conditions are generated by heavy rains falling on the low and median elevation snow pack.

Soil moisture at low and median elevations is generally near or over field capacity as a result of recent snow melt. Higher elevation soils are not saturated as very little melt has occurred.

Reservoirs are generally being regulated to control spring runoff and help reduce peak flows.

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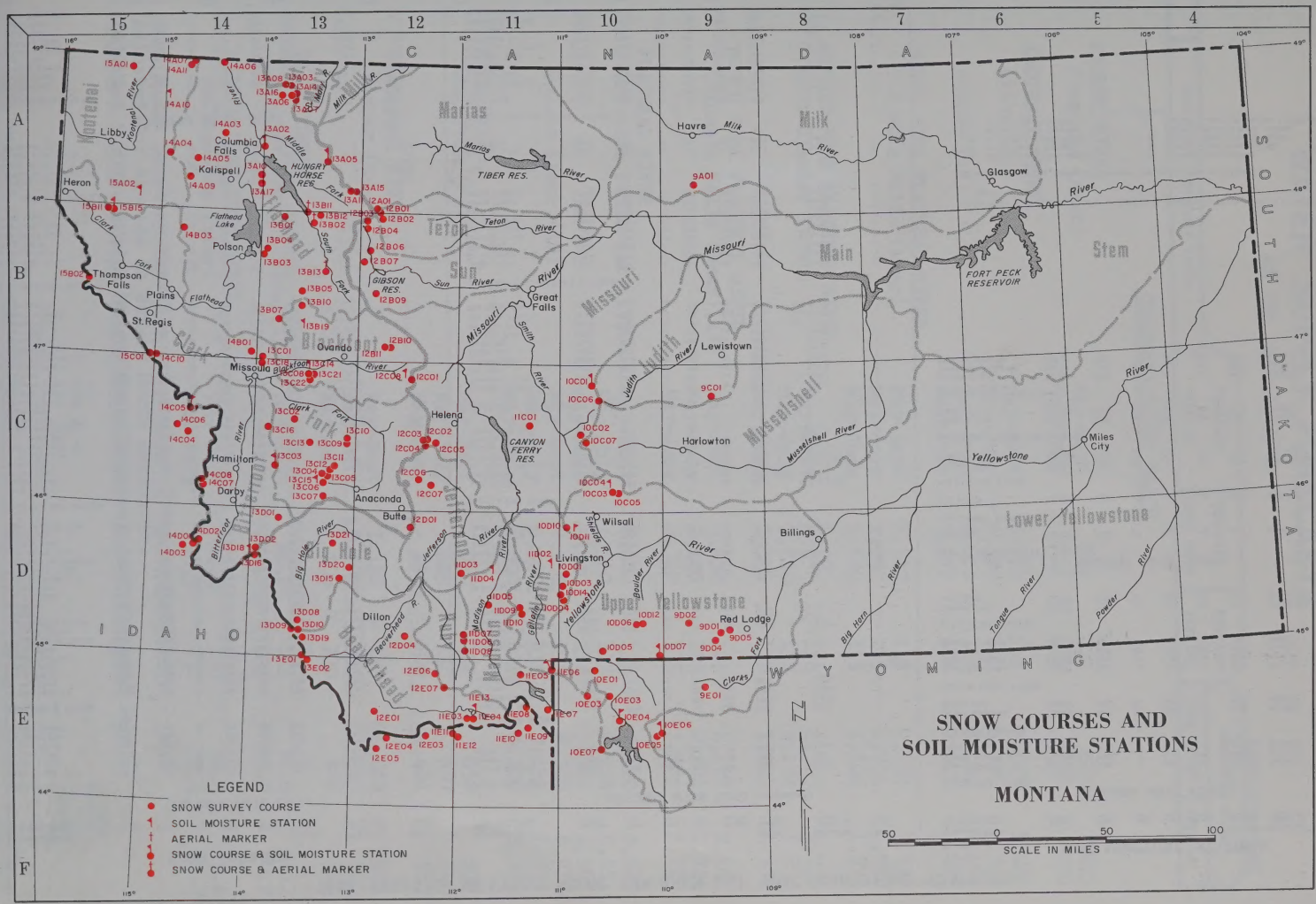
SNOW COURSES AND
SOIL MOISTURE STATIONS
MONTANA
LEGEND
SNOW SURVEY COURSE
SOIL MOISTURE STATION
AERIAL MARKER
SNOW COURSE & SOIL MOISTURE STATION
SNOW COURSE & AERIAL MARKER
SCALE IN MILES
CANADA
IDAHO
WYOMING
SOUTH DAKOTA
Libby
Columbia Falls
Kalispell
Heron
Polson
Thompson Falls
Plains
St. Regis
Missoula
Hamilton
Darby
Anaconda
Butte
Helena
Ovando
Great Falls
Havre
Glasgow
Lewistown
Harlowton
Miles City
Billings
Wilsall
Livingston
Dillon
Red Lodge
TIBER RES.
GIBSON RES.
CANYON FERRY RES.
FORT PECK RESERVOIR
Flathead Lake
HUNGRY HORSE RES.
Kootenai
Marias
Milk
Teton
Sun
Missouri
Main
Stem
Blackfoot
Clark Fork
Bitterroot
Big Hole
Beaverhead
Madison
Gallatin
Jefferson
Upper Yellowstone
Lower Yellowstone
Musselshell
Judith
Boulder
Stillwater
Clarks Fork
Big Horn
Tongue
Powder

1965 INDEX to MONTANA SNOW COURSES and SOIL MOISTURE STATIONS

SNOW COURSES

COLUMBIA RIVER BASIN

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
KOOTENAI RIVER								
Baree Creek	15B11	5500	36	26N	31W	1956	3,4,5,5½	2
Baree Trail	15B15	3800	5	25N	30W	1965	3,4,5,5½	2
Brush Creek	14A04	5000	12	30N	26W	1937	3,4,5	1,2
Graves Creek	14A11	4300	1	36N	25W	1965	3,4,5,5½	1,2
Red Mountain	15A01	6000	4	36N	29W	1937	3,4,5,5½,6	1,2
Weasel Divide	14A07	5450	20	37N	24W	1937	3,4,5,5½,6	1,2
FLATHEAD RIVER								
Bassoo Peak	14B03	5150	11	24N	25W	1961	3,4,5	1,5
Beaver Lake	13A11	5900	31	28N	11W	1964	3,4,5	1
Big Creek	13B03	6750	7	22N	18W	1941	3,4,5, 6	1,5
Camp Misery	13A17	6400	30	28N	18W	1962	3,4,5	1,2
Desert Mountain	13A02	5600	24	31N	19W	1937	1,2,3,4,5, 6	1,2
Fatty Creek	13B04	5500	8	22N	18W	1962	3,4,5, 6	1,5
Griffin Creek Divide	14A09	5150	11	28N	25W	1960	3,4,5	1,5
Gunsight Lake	13B12	6300	35	26N	14W	1964	3,4,5	1
Hell Roaring Divide	14A03	5770	35	32N	22W	1942	1,2,3,4,5,5½,6	2
Holbrook	13B13	4530	18	21N	13W	1951	1,2,3,4,5	1
Kishenehn	14A06	3890	14	37N	22W	1954	3,4	6
Logan Creek	14A05	4300	34	30N	24W	1937	3,4,5	1,2
Marias Pass	13A05	5250	34	30N	14W	1934	1,2,3,4,5	3
Mineral Creek	13A16	4000	29	35N	17W	1957	3,4,5	6
North Fork Jocko	13B07	6330	3	17N	17W	1941	3,4,5,5½,6	1,5
Spotted Bear Mountain	13B02	7000	23	25N	15W	1948	1,2,3,4,5	1,2
Strawberry Lake	13A10	5600	11	28N	19W	1948	3,4,5	1
Trinkus Lake	13B01	6100	9	25N	17W	1948	3,4,5	1
Twin Creeks	13B11	3680	24	26N	16W	1951	1,2,3,4,5	1,2
Upper Holland Lake	13B05	7000	28	20N	15W	1948	3,4,5	1
CLARK FORK RIVER								
Black Pine	13C13	7100	26	8N	15W	1959	3,4,5	1,2
Copper Creek	12B10	5700	1	15N	9W	1962	3,4,5	1,2
Cotter Mine	12B11	6200	2	15N	9W	1962	3,4,5	1,2
Coyote Hill	13B12	4200	12	18N	16W	1947	1,2,3,4,5	1,2
El Dorado Mine	13C09	7800	23	8N	12W	1949	3,4	1
Fred Burr Pass	13C11	8000	12	6N	13W	1957	3,4,5	1
Gold Creek Lake	13C10	7200	14	8N	12W	1949	3,4	1
Heart Lake Trail	14C10	4800	11	14N	27W	1965	3,4,5	1,2
Hoodoo Creek	15C01	5900	16	14N	27W	1937	3,4,5	1,2
Intergaard	13C04	6450	6	5N	13W	1936	2,3,4,5	4
Lubrecht Forest No. 3	13C21	5450	19	13N	14W	1951	1,2,3,4,5	8
Lubrecht Forest No. 4	13C22	4650	23	13N	15W	1951	1,2,3,4,5	8
Lubrecht Forest No. 6	13C08	4040	11	13N	15W	1951	1,2,3,4,5	8
Red Lion	13C12	7110	22	6N	13W	1958	3,4,5	1
Skalkaho Summit	13C03	7260	30	6N	17W	1937	3,4,5,5½,6	1
Slide Rock Mountain	13C02	7100	35	10N	16W	1937	3,4,5	1
Southern Cross	13C05	6500	8	5N	13W	1936	2,3,4	4
Spring Gulch	13C18	6000	12	14N	19W	1961	1,2,3,4,5	8
Storm Lake	13C07	7780	19	4N	13W	1939	1,2,3,4,5	1
Stuart Hill	13C06	6500	19	5N	13W	1936	2,3,4	4
Stuart Mountain	13C01	7400	6	14N	18W	1936	1,2,3,4,5, ,6	8
TV Mountain	14B01	6800	33	15N	19W	1956	1,2,3,4,5	8
BITTERROOT RIVER								
Asbrose	13C16	6480	28	9N	18W	1960	3,4,5	1
East Fork R. S.	13D01	5400	16	2N	17W	1937	3,4	1
Gibbons Pass	13D02	7100	4	2S	19W	1934	1,2,3,4,5,5½,6	1,3
Lost Horse	14C07	5940	5	4N	23W	1960	3,4,5	1
Nez Perce Camp	14D02	5680	19	1S	23W	1937	3,4,5	1
Nez Perce Pass	14D01	6970	25	1S	24W	1937	3,4,5	1
Twin Lakes	14C08	6510	32	5N	23W	1960	3,4,5	1
ST. MARY RIVER BASIN								
Iceberg Lake No. 3	13A03	5600	1	35N	17W	1922	5	3,9
Josephine Lower No. 9	13A14	4900	22	35N	16W	1955	5	3,9
Mount Allen No. 7	13A07	5700	27	35N	16W	1922	5	3,9
Piegan Pass No. 6	13A06	5500	27	35N	16W	1922	5	3,9
Ptarmigan No. 8	13A08	5800	36	36N	17W	1937	5	3,9

MISSOURI RIVER BASIN

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
BEAVERHEAD RIVER								
Bloody Dick	13D10	7600	12	8S	16W	1948	3,4,5	1
Carter Creek	12D04	7400	22	8S	7W	1963	3,4	1
Elkhorn Springs	13D15	7800	21	4S	12W	1935	3,4,5	3
Gold Stone	13D09	8100	11	8S	16W	1948	3,4,5	1
Lakeview Canyon	11E04	6930	26	14S	2W	1948	3,4,5	10
Lakeview Ridge	11E03	7400	27	14S	2W	1948	3,4,5	10
Lemhi Pass	13E01	7480	9	10S	15W	1948	3,4	1
Trail Creek	13E02	7090	15	10S	15W	1948	3,4	1
White Pine Ridge	12E01	8850	18	14S	9W	1948	3,4,5	1
RUBY RIVER								
Clover Meadow	11D08	8600	28	9S	2W	1963	3,4,5	1
Divide	12E07	7900	14	12S	4W	1963	3,4,5	1
Notch	12E06	8500	18	11S	4W	1963	3,4,5	1
BIG HOLE RIVER								
Abundance Lake	13D20	8800	7	3S	11W	1963	3,4,5	1
Darkhorse Lake	13D19	8600	4	8S	16W	1963	3,4,5	1
Foolhen	13D21	8500	11	1S	13W	1963	3,4,5	1
Johnson Creek	13D08	7340	25	7S	16W	1948	3,4,5	1
JEFFERSON RIVER								
Berry Meadow	12C07	7300	8	5N	5W	1962	3,4,5	1
Picnic Grounds	12C06	6500	10	5N	6W	1941	2,3,4	4
Pipestone Pass	12D01	7200	10	1N	7W	1938	1,2,3,4,5	1
MADISON RIVER								
Call Road	11D07	8050	21	8S	2W	1962	3,4,5	1
Crockett Lake	11D06	8400	20	8S	2W	1962	3,4,5	1
Hebgen Dam	11E05	6550	22	11S	3E	1934	1,2,3,4,5	3
Jack Creek	11D05	6800	13	6S	1E	1961	3,4	1
North Meadow	11D03	7500	23	3S	3W	1961	3,4	1
West Yellowstone	11E07	6700	34	13S	5E	1934	1,2,3,4,5	3
GALLATIN RIVER								
Arch Falls	10D14	7350	3	5S	6E	1963	2,3,4,5,5½	1
Bear Basin	11D09	8150	9	6S	3E	1963	3,4,5	1
Devil's Slide	10D04	8100	14	5S	6E	1935	2,3,4,5,5½,6	1
Hood Meadow	10D03	6600	22	4S	6E	1935	2,3,4,5,5½	1
Little Park	11D10	7400	22	6S	3E	1963	3,4,5	1
New World	10D01	6700	24	3S	6E	1939	2,3,4	1
Twenty-One Mile	11E06	7150	1	11S	5E	1934	1,2,3,4,5	3
MISSOURI RIVER MAIN STEM								
Boulder Mountain	11C01	7950	1	9N	3E	1963	3,4,5	1
Chessman Reservoir	12C05	6200	2	8N	5W	1936	1,2,3,4,5	3
Elk Peak	10C07	8000	10	8N	8E	1963	3,4,5	1
Grasshopper	10C02	7000	19	9N	8E	1938	3,4,5	1
Kings Hill	10C01	7500	34	13N	8E	1934	3,4,5	3
Rocky Boy	9A01	5200	15	28N	16E	1941	3,4	7
Stemple Pass	12C01	6600	16	13N	7W	1934	3,4,5	3
Ten Mile Lower	12C02	6600	12	8N	6W	1935	1,2,3,4,5	3
Ten Mile Middle	12C03	6800	13	8N	6W	1934	1,2,3,4,5	3
Ten Mile Upper	12C04	8000	19	8N	5W	1935	1,2,3,4,5	3
SUN-TETON-MARIAS RIVERS								
Badger Pass	13A15	6900	4	27N	11W	1964	3,4,5	1
Cabin Creek	12B06	5200	33	23N	10W	1949	3,4,5	1
Five-Bull	12B09	5700	25	20N	10W	1948	3,4,5	1
Freight Creek	12A01	6000	13	26N	10W	1948	3,4,5	1
Goat Mountain	12B07	7000	20	22N	10W	1934	3,4,5	3
Waldron Creek	12B02	5300	16	25N	9W	1948	3,4,5	1
West Fork	12B01	6000	6	25N	9W	1948	3,4,5	1
Wrong Creek	12B04	5700	32	25N	10W	1949	3,4,5	1
Wrong Ridge	12B03	6800	17	25N	10W	1949	3,4,5	1
JUDITH RIVER								
Crystal Lake	9C01	6100	19	12N	18E	1941	3,4	1
Spur Park	10C06	8000	20	12N	9E	1963	3,4,5	1
UPPER YELLOWSTONE RIVER								
Bald Ridge	10C05	7500	11	4N	10E	1961	3,4	1
Camp Senia	9D01	7890	2	8S	18E	1937	3,4,5	1
Crevice Mountain	10D05	8400	22	9S	9E	1935	3,4	2
Grizzly Peak	9D05	8400	26	7S	19E	1961	1,2,3,4,5	1
Independence	10D06	8000	22	7S	12E	1940	3,4,5	1
Monument Peak	10D12	9000	22	7S	12E	1961	3,4,5	1
Northeast Entrance	10D07	7400	33	9S	14E	1937	1,2,3,4,5	6
Porcupine R. S.	10C03	6500	10	4N	10E	1938	3,4	1
Sacajawea	10D10	6550	36	2N	6E	1960	3,4,5	1
Timberline Creek	9D04	8850	10	8S	18E	1961	3,4,5	1
West Rosebud	9D02	7500	9	7S	16E	1960	3,4	4

SOIL MOISTURE STATIONS

COLUMBIA RIVER BASIN

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
KOOTENAI RIVER								
Baree Trail	15B15M	3800	5	25N	30W	1964	Monthly	2
Murphy Lake R. S.	14A10M	3000	5	34N	25W	1964	Monthly	2
Raven R. S.	15A02M	3050	2	26N	29W	1964	Monthly	2
FLATHEAD RIVER								
Desert Mountain	13A02M	5600	24	31N	19W	1956	Monthly	1
Marias Pass	13A05M	5250	34	30N	14W	1950	Monthly	1
CLARK FORK RIVER								
Georgetown Lake	13C15M	6450	6	5N	13W	1962	Monthly	1
Lubrecht Forest	13C14M	4100	11	13N	15W	1961	Monthly	8
Seeley Lake	13B19M	4030	21	17N	15W	1963	Monthly	2
Skalkaho Summit	13C03M	7260	30	6N	17W	1964	Monthly	1
BITTERROOT RIVER								
Gibbons Pass	13D18M	7100	4	2S	19W	1962	Monthly	1
Lolo Pass	14C05M	5250	11	10N	24W	1963	Monthly	1

MISSOURI RIVER BASIN

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
BEAVERHEAD RIVER								
Lakeview	11E13M	6700	23	14S	2W	1962	Monthly	10
MADISON RIVER								
Red Bluff	11D02M	4800	7	3S	1E	1961	Monthly	7
GALLATIN RIVER								
College Site	11D02M	4856	18	2S	5E	1956	Monthly	1
Twenty-One Mile	11E06M	7150	1	11S	5E	1963	Monthly	6
MISSOURI RIVER MAIN STEM								
Stemple Pass	12C08M	6350	16	13N	7W	1963	Monthly	1
Kings Hill	10C01M	7420	34	13N	8E	1963	Monthly	1
YELLOWSTONE RIVER								
Battle Ridge	10D11M	6020	32	2N	7E	1960	Monthly	1
Northeast Entrance	10D07M	7350	33	9S	14E	1962	Monthly	6
Shields River	10C04M	5850	4	4N	10E	1960	Monthly	1

1/ Numerals 1,2,3,4,5,5½,6 refer to January 1, February 1, March 1, April 1, May 1, May 15 and June 1.

2/ Numerals refer to Agency that secures the snow survey as follows:

1. Soil Conservation Service
2. U. S. Forest Service
3. U. S. Geological Survey
4. Montana Power Company
5. U. S. Indian Service
6. National Park Service
7. Montana Experiment Station
8. Montana State Forestry School
9. Dominion Water & Power Bureau
10. Bureau of Sport Fisheries & Wildlife

M - Soil Moisture

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	COLUMBIA RIVER BASIN					
	FISHER RIVER					
3020	Jennings (near)	May-Sept	229	102	223	223
		May-July	211	102	206	206
	KOOTENAI RIVER					
3030	Libby (at)	May-Sept	7,580	102	7,447	7,428
		May-July	6,480	102	6,389	6,342
3050	Leonia (at)	May-Sept	8,600	102	8,424	8,416
		May-July	7,450	102	7,301	7,268
	NORTH FORK FLATHEAD RIVER					
3555	Columbia Falls (near)	May-Sept	2,100	115	2,152	1,833
		May-July	1,900	115	1,964	1,650
		May-June	1,580	115	1,666	1,371
	MIDDLE FORK FLATHEAD RIVER					
3585	West Glacier (near)	May-Sept	2,050	118	2,363	1,736
		May-July	1,880	118	2,182	1,598
		May-June	1,570	118	1,851	1,334
	SOUTH FORK FLATHEAD RIVER					
3625	Columbia Falls (near)(17)	May-Sept	2,630	125	2,467	2,103
		May-July	2,480	125	2,304	1,985
		May-June	2,140	125	1,986	1,710
	FLATHEAD RIVER					
3630	Columbia Falls (at)(17)	May-Sept	6,900	118	7,108	5,820
		May-July	6,360	118	6,558	5,351
		May-June	5,340	118	5,581	4,507
3720	Polson (near)(18)	May-Sept	8,150	118	8,320	6,914
		May-July	7,500	118	7,582	6,365
		May-June	6,300	118	6,380	5,324
	SWAN RIVER					
3700	Big Fork (near)	May-Sept	720	120	658	599
		May-July	625	120	567	520
		May-June	490	120	434	408
	BLACKFOOT RIVER					
3400	Bonner (near)	May-Sept	1,190	130	1,043	914
		May-July	1,065	130	942	816
		May-June	900	130	808	690
	FLINT CREEK					
3301	Boulder Creek (below)(13)	May-Sept	80.0	125	81.9	64.1
		May-July	62.7	125	65.7	50.2
	MIDDLE FORK ROCK CREEK					
3320	Philipsburg (near)	May-Sept	96.0	130	84.4	73.6
		May-July	86.3	130	75.4	66.3

(13) Sum, Flint Creek at Maxville and Boulder Creek at Maxville.
(17) Adjusted for storage in Hungry Horse Reservoir.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT		FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	AVERAGE
	COLUMBIA RIVER BASIN						
	FISHER RIVER						
3020	Jennings (near)	May-Sept	229	102	225	223
		May-July	211	102	206	206
	KOOTENAI RIVER						
3030	Libby (at)	May-Sept	7,590	102	7,447	7,428
		May-July	6,280	102	6,295	6,322
3050	Leonia (at)	May-Sept	8,650	102	8,424	8,416
		May-July	7,450	102	7,301	7,268
	NORTH FORK FLATHEAD RIVER					
3555	Columbia Falls (near)	May-Sept	2,100	115	2,152	1,872
		May-July	1,900	115	1,964	1,650
		May-June	1,580	115	1,666	1,372
	MIDDLE FORK FLATHEAD RIVER					
3585	West Glacier (near)	May-Sept	2,050	118	2,363	1,736
		May-July	1,880	118	2,182	1,398
		May-June	1,570	118	1,851	1,232
	SOUTH FORK FLATHEAD RIVER					
3625	Columbia Falls (near)(17)	May-Sept	2,630	125	2,167	2,103
		May-July	2,480	124	2,304	1,985
		May-June	2,120	125	1,986	1,716
	FLATHEAD RIVER					
3630	Columbia Falls (at)(17)	May-Sept	6,900	118	7,208	5,820
		May-July	6,360	118	6,558	5,351
		May-June	5,340	118	5,581	4,507
3720	Polson (near)(18)	May-Sept	8,150	118	8,320	6,914
		May-July	7,500	118	7,582	6,365
		May-June	6,300	118	6,380	5,324
	SWAN RIVER					
3700	Big Fork (near)	May-Sept	720	120	638	599
		May-July	625	120	567	526
		May-June	490	120	434	408
	BLACKFOOT RIVER					
3400	Bonner (near)	May-Sept	1,190	130	1,023	914
		May-July	1,065	130	942	816
		May-June	900	130	808	690
	FLINT CREEK					
3701	Boulder Creek (below)(13)	May-Sept	80.0	125	81.9	64.1
		May-July	62.7	125	65.7	50.2
	MIDDLE FORK ROCK CREEK					
3320	Philipsburg (near)	May-Sept	96.0	130	84.4	73.6
		May-July	86.3	130	75.4	66.3

(13) Sum, Flint Creek at Maxville and Boulder Creek at Maxville.
(17) Adjusted for storage in Hungry Horse Reservoir.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

*Provisional data furnished by U.S. Geological Survey

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	CLARK FORK RIVER					
3404	Milltown (above)(14)	May-Sept	900	131	917	686
		May-July	700	131	794	589
		May-June	643	131	661	490
3405	Missoula (above)	May-Sept	2,090	131	1,960	1,600
		May-July	1,835	131	1,736	1,405
		May-June	1,543	131	1,469	1,180
3530	Missoula (below)	May-Sept	3,855	129	3,615	2,984
		May-July	3,465	129	3,238	2,681
		May-June	2,933	130	2,690	2,263
3545	St. Regis (at)	May-Sept	5,060	125	4,717	4,036
		May-July	4,550	125	4,218	3,624
		May-June	3,840	125	3,510	3,066
3890	Plains (near)(18)	May-Sept	13,560	120	13,180	11,286
		May-July	12,320	120	11,892	10,230
		May-June	10,300	120	9.856	8,570
3920	Whitehorse Rapids (at)(19)	May-Sept	15,100	120	14,530	12,580
		May-July	13,650	120	13,064	11,369
		May-June	11,400	120	10,819	9,499
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(15)	May-Sept	200	127	233	157
		May-July	186	127	216	146
	BITTERROOT RIVER					
3440	Darby (near)	May-Sept	656	127	695	518
		May-July	608	127	673	478
		May-June	525	127	566	414
3528	Missoula (at)(16)	May-Sept	1,765	128	1,655	1,384
		May-July	1,630	128	1,502	1,277
		May-June	1,390	128	1,221	1,084
	BLODGETT CREEK					
3475	Corvallis (near)	May-Sept	51.0	128		39.9
		May-July	48.5	128		37.9

(14) Difference in observed flow, Clark Fork above Missoula & Blackfoot near Bonner.
(15) Adjusted for storage in Painted Rocks Reservoir.
(16) Difference in observed flow, Clark Fork above and below Missoula.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.
(19) Adjusted for storage in Hungry Horse, Flathead Lake and Noxon Rapids Reservoirs.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

[1000 Acre Feet]

No.	River and Forecast Point	Forecast Period	Forecast This Year	Percent Average	Measured Flow Last Year	Average
	CLARK FORK RIVER					
3404	Milltown (above)(14)	May-Sept	900	131	917	686
		May-July	700	131	794	589
		May-June	643	131	661	490
3405	Missoula (above)	May-Sept	2,090	131	1,960	1,600
		May-July	1,639	131	1,736	1,405
		May-June	1,543	131	1,469	1,180
3530	Missoula (below)	May-Sept	3,855	129	3,615	2,984
		May-July	3,465	129	3,238	2,681
		May-June	3,073	130	2,690	2,363
3545	St. Regis (at)	May-Sept	5,060	125	4,717	4,036
		May-July	4,550	125	4,218	3,624
		May-June	3,820	125	3,520	3,066
3890	Plains (near)(18)	May-Sept	15,560	120	13,180	11,286
		May-July	12,320	120	11,892	10,230
		May-June	10,300	120	9,878	8,570
3920	Whitehorse Rapids (at)(19)	May-Sept	15,100	120	14,530	12,580
		May-July	13,560	120	13,064	11,369
		May-June	11,400	120	10,819	9,499
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(15)	May-Sept	200	127	233	157
		May-July	166	127	216	126
	BITTERROOT RIVER					
3440	Darby (near)	May-Sept	656	127	695	518
		May-July	608	127	673	478
		May-June	525	127	566	414
3528	Missoula (at)(16)	May-Sept	1,765	128	1,655	1,384
		May-July	1,630	128	1,507	1,277
		May-June	1,390	128	1,282	1,084
	BLODGETT CREEK					
3475	Corvallis (near)	May-Sept	51.0	128		39.9
		May-July	43.5	128		37.9

(14) Difference in observed flow, Clark Fork above Missoula & Blackfoot near Bonner.
(15) Adjusted for storage in Painted Rocks Reservoir.
(16) Difference in observed flow, Clark Fork above and below Missoula.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.
(19) Adjusted for storage in Hungry Horse, Flathead Lake and Noxon Rapids Reservoirs

PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER BASIN					
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	May-Sept	73.7	148	72.6	49.8
		May-July	65.7	148	65.8	44.3
0125	Monida (near)(1)	May-Sept	80.0	146	95.4	54.9
		May-July	73.2	146	92.8	50.2
	BIG HOLE RIVER					
0255	Melrose (near)	May-Sept	831	133	788	625
		May-July	770	133	724	576
	BOULDER RIVER					
0330	Boulder (near)	May-Sept	80.6	122	101	66.4
		May-July	77.0	122	96.5	63.2
	JEFFERSON RIVER					
0345	Sappington (at)	May-Sept	1,120	136	1,187	824
		May-July	985	136	1,066	725
	MADISON RIVER					
0375	West Yellowstone (near)	May-Sept	215	120	190	179
		May-July	155	120	140	129
0385	Grayling (near)(2)	May-Sept	447	123	426	364
		May-July	338	123	332	274
0410	McAllister (near)(3)	May-Sept	780	125	784	623
		May-July	600	125	626	481
	GALLATIN RIVER					
0435	Gateway (near)	May-Sept	536	128	527	418
		May-July	452	128	451	353
	BRIDGER CREEK					
0485	Bozeman (near)	May-Sept	21.5	130	21.8	16.5
		May-July	19.8	130	20.1	15.3
	HYALITE CREEK					
0500	Bozeman (near)(4)	May-Sept	43.5	133	43.0	32.6
		May-July	37.0	133	37.3	27.8
	GALLATIN RIVER					
0525	Logan (at)	May-Sept	567	142	568	400
		May-July	470	142	470	330

(1) Adjusted for storage in Lima Reservoir.
(2) Adjusted for storage in Hebgen Lake.
(3) Adjusted for storage in Hebgen and Ennis Lakes.
(4) Adjusted for storage in Middle Creek Reservoir.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

(1000 acre feet)

No.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER BASIN					
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	May-Sept	73.7	142	72.6	49.8
		May-July	65.7	142	65.8	44.3
0125	Monida (near)(1)	May-Sept	80.0	146	95.4	54.9
		May-July	73.2	146	92.8	50.2
	BIG HOLE RIVER					
0245	Melrose (near)	May-Sept	831	133	788	625
		May-July	770	133	724	576
	BOULDER RIVER					
0330	Boulder (near)	May-Sept	80.6	122	101	66.4
		May-July	77.0	122	96.5	63.2
	JEFFERSON RIVER					
0345	Sappington (at)	May-Sept	1,120	136	1,187	824
		May-July	995	136	1,066	725
	MADISON RIVER					
0375	West Yellowstone (near)	May-Sept	215	120	190	179
		May-July	155	120	140	129
0385	Grayling (near)(2)	May-Sept	447	123	426	364
		May-July	338	123	332	274
0410	McAllister (near)(3)	May-Sept	780	125	784	623
		May-July	600	125	626	481
	GALLATIN RIVER					
0435	Gateway (near)	May-Sept	536	128	527	418
		May-July	452	128	451	353
	BRIDGER CREEK					
0485	Bozeman (near)	May-Sept	21.5	130	21.8	16.5
		May-July	19.8	130	20.1	15.3
	HYALITE CREEK					
0500	Bozeman (near)(4)	May-Sept	43.5	133	43.0	32.6
		May-July	37.0	133	37.3	27.8
	GALLATIN RIVER					
0525	Logan (at)	May-Sept	567	142	568	400
		May-July	470	142	470	330

(1) Adjusted for storage in Lima Reservoir.
(2) Adjusted for storage in Hebgen Lake.
(3) Adjusted for storage in Hebgen and Ennis Lakes.
(4) Adjusted for storage in Middle Creek Reservoir.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER					
0545	Toston (at)(3)	May-Sept	2,400	132	2,433	1,816
		May-July	2,020	132	2,102	1,530
0908	Fort Benton (at)(5)	May-Sept	3,740	130	4,520	2,861
		May-July	3,080	130	3,838	2,367
1095	Virgelle (at)(6)	May-Sept	4,500	127	5,684	3,557
		May-July	3,800	127	5,073	2,999
1150	Zortman (near)(6)	May-Sept	5,000	129	6,296	3,885
		May-July	4,180	129	5,566	3,254
1320	Fort Peck Dam (below)(7)	May-Sept	4,850	130	6,075	3,728
		May-July	4,150	130	5,547	3,200
1770	Wolf Point (near)(7)	May-Sept	5,060	128		3,942
		May-July	4,330	128		3,380
3300	Williston, N.D. (near)(8)	May-Sept	12,200	131	13,100	9,299
		May-July	10,600	131	11,953	8,068
	PRICKLY PEAR CREEK					
0615	Clancy (near)	May-Sept	23.0	121	33.3	19.0
		May-July	19.7	121	28.4	16.2
	SUN RIVER					
0786	Gibson Dam (at)(10)	May-Sept	700	122	721	573
		May-July	636	122	674	522
0920	TWO MEDICINE CREEK					
	Browning (near)(20)	May-Sept	290	120	293	241
		May-July	276	120	279	229
	BADGER CREEK					
0925	Browning (near)	May-Sept	152	115	184	132
		May-July	129	115	166	112
	CUT BANK CREEK					
0990	Cut Bank (at)	May-Sept	134	111	136	121
		May-July	112	111	125	101
	MARIAS RIVER					
0995	Shelby (near)(9)	May-Sept	657	116	783	564
		May-July	616	116	746	530

(3) Adjusted for storage in Hebgen and Ennis Lakes.
(5) Adjusted for storage in Canyon Ferry Reservoir.
(6) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.
(7) Adjusted for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.
(8) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill and Boysen Reservoirs.
(9) Adjusted for storage in Two Medicine, Four Horns, Lake Frances and Swift Reservoirs.
(10) Adjusted for storage in Gibson Reservoir and diversions.
(20) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

(1000 Acre Feet)

No.	River and Forecast Point	Forecast Period	Forecast This Year	Forecast Average	Measured Flow Last Year*	Measured Flow Average
	MISSOURI RIVER					
0545	Toston (at)(3)	May-Sept	2,400	132	2,423	1,816
		May-July	2,020	132	2,102	1,530
0908	Fort Benton (at)(5)	May-Sept	3,740	130	4,520	2,891
		May-July	3,080	130	3,858	2,367
1095	Virgelle (at)(6)	May-Sept	4,500	127	5,484	3,557
		May-July	3,800	127	5,073	2,999
1180	Dorman (near)(6)	May-Sept	5,000	129	6,290	3,885
		May-July	4,130	129	5,566	3,254
1520	Fort Peck Dam (below)(7)	May-Sept	4,330	130	6,075	3,728
		May-July	4,150	130	5,547	3,200
1770	Wolf Point (near)(7)	May-Sept	3,060	128		3,942
		May-July	4,330	128		3,380
3300	Williston, N.D. (near)(8)	May-Sept	12,200	131	13,100	9,299
		May-July	10,600	131	11,953	8,068
	PRICKLY PEAR CREEK					
0615	Clancy (near)	May-Sept	28.0	121	23.3	19.0
		May-July	19.7	121	23.4	16.2
	SUN RIVER					
0780	Gibson Dam (at)(10)	May-Sept	700	122	721	573
		May-July	636	122	674	522
0920	**TWO MEDICINE CREEK**					
	Browning (near)(20)	May-Sept	290	120	293	241
		May-July	276	120	279	228
	BADGER CREEK					
0925	Browning (near)	May-Sept	152	116	184	132
		May-July	129	115	166	112
	CUT BANK CREEK					
0990	Cut Bank (at)	May-Sept	134	121	136	121
		May-July	112	121	125	101
	MARIAS RIVER					
0995	Shelby (near)(9)	May-Sept	657	116	783	564
		May-July	616	116	746	530

(3) Adjusted for storage in Hebgen and Ennis Lakes.
(5) Adjusted for storage in Gravon Ferry Reservoir.
(6) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.
(7) Adjusted for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.
(8) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Rift and Boysen Reservoirs.
(9) Adjusted for storage in Two Medicine, Four Horns, Lake Frances and Swift Reservoirs.
(10) Adjusted for storage in Gibson Reservoir and diversions.
(20) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

*Provisional data furnished by U.S. Geological Survey

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	SOUTH FORK MUSSELSHELL R.					
1185	Martinsdale (above)	May-Sept	58.0	136	56.4	42.8
		May-July	55.3	136	54.6	40.7
	MILK RIVER					
1350	Eastern Crossing (at)	May-Sept	185	90	249	206
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	May-Sept	2,180	122	2,063	1,792
		May-July	1,810	122	1,700	1,487
1925	Livingston (near)	May-Sept	2,470	122	2,308	2,019
		May-July	2,030	122	1,888	1,662
2145	Billings (at)	May-Sept	4,750	129	4,198	3,675
		May-July	4,040	129	3,612	3,124
3090	Miles City (at)(12)	May-Sept	7,000	132		5,307
		May-July	6,080	132		4,609
3295	Sidney (near)(12)	May-Sept	7,100	135		5,245
		May-July	6,250	135		4,625
	SHIELDS RIVER					
1935	Clyde Park (at)	May-Sept	122	149	124	82.1
		May-July	112	149	112	75.3
	BOULDER RIVER					
2000	Big Timber (at)	May-Sept	447	135	366	330
		May-July	417	135	343	309
	STILLWATER RIVER					
2050	Absarokee (near)(11)	May-Sept	725	136	537	531
		May-July	605	136	470	444
	CLARKS FORK RIVER					
2075	Chance (at)	May-Sept	673	120	587	560
		May-July	605	120	546	504
2085	Edgar (at)	May-Sept	707	122	621	578
		May-July	620	122	573	507
	ROCK CREEK					
2095	Red Lodge (near)	May-Sept	130	129	94.4	101
		May-July	100	129	76.4	77.2

(11) Adjusted for storage in Mystic Lake.
(12) Adjusted for storage in Buffalo Bill and Boysen Reservoirs.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF MAY 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	FORECAST AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	SOUTH FORK MUSSELSHELL R.					
1185	Martinsdale (above)	May-Sept	58.0	136	56.4	42.8
		May-July	55.3	136	52.6	40.7
	MILK RIVER					
1350	Eastern Crossing (at)	May-Sept	185	90	249	206
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	May-Sept	2,180	122	2,063	1,792
		May-July	1,810	122	1,720	1,487
1925	Livingston (near)	May-Sept	2,470	122	2,308	2,019
		May-July	2,030	122	1,888	1,652
2145	Billings (at)	May-Sept	4,750	129	4,308	3,675
		May-July	4,040	129	3,612	3,124
3090	Miles City (at)(12)	May-Sept	7,000	132		5,307
		May-July	6,080	132		4,609
3295	Sidney (near)(12)	May-Sept	7,100	135		5,224
		May-July	6,250	135		4,424
	SHEILDS RIVER					
1935	Clyde Park (at)	May-Sept	122	149	124	82.1
		May-July	112	149	112	75.3
	BOULDER RIVER					
2000	Big Timber (at)	May-Sept	447	135	366	320
		May-July	417	135	342	309
	STILLWATER RIVER					
2050	Absarokee (near)(11)	May-Sept	725	136	527	531
		May-July	605	136	470	444
	CLARKS FORK RIVER					
2075	Chance (at)	May-Sept	673	120	587	560
		May-July	605	120	516	534
2085	Edger (at)	May-Sept	707	122	621	578
		May-July	630	122	573	507
	ROCK CREEK					
2095	Red Lodge (near)	May-Sept	130	129	94.4	101
		May-July	100	129	76.4	77.2

(11) Adjusted for storage in Mystic Lake.
(12) Adjusted for storage in Buffalo Bill and Boysen Reservoirs.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1930-1964 (35 YEAR PERIOD)

SNOW SURVEY DATA

AS OF MAY 1, 1965

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	COLUMBIA RIVER BASIN						
KOOTENAI RIVER							
15B11	Baree Creek	5500	4/29	88	45.2	58.8	49.1
15B15	Baree Trail	3800	4/29	0	0.0	-	-
14A04	Brush Creek	5000	4/28	26	10.2	12.4	10.7*
BC 10	Fernie	3500	4/29	7	3.1	3.8	2.8
BC 12A	Field	4200	4/30	0	0.0	0.0	0.6*
BC 11	Glacier	4100	4/30	45	22.6	27.8	25.9
14A11	Graves Creek	4300	4/30	40	16.9	-	-
BC 43	Gray Creek	5100	4/27	53	21.9	23.0	20.2
BC 33	Kicking Horse	5400	4/30	38	14.6	12.1	12.2
BC 20B	Kimberley	3800	4/30	0	0.0	0.3	1.2*
BC 32	Marble Canyon	5000	4/29	31	11.2	10.2	13.4
BC 10B	Morrissey Ridge	6100	4/30	68	28.0	-	-
BC 10A	New Fernie	4100	4/29	19	9.3	11.2	6.0*
15A01	Red Mountain	6000	4/29	52	21.9	16.6	20.9
BC 8A	Sinclair Pass	4500	4/29	0	0.0	1.7	2.2*
BC 20A	Sullivan Mine	5100	4/30	25	11.0	11.5	12.5
BC 41	Upper Elk River	4400	4/26	8	3.0	3.2	2.5*
14A07	Weasel Divide	5450	4/30	80	38.2	37.8	35.7*
FLATHEAD RIVER							
14B03	Bassoo Peak	5150	4/27	19	7.4	8.9	9.7*
13A11	Beaver Lake	5900	5/3	68	32.1	30.9	-
13B03	Big Creek	6750	4/29	119	59.8	51.6	50.5*
13A17	Camp Misery	6400	4/28	138	65.8	57.0	-
13A02	Desert Mountain	5600	4/27	43	20.6	16.5	14.6
13B04	Fatty Creek	5500	4/29	56	26.1	28.0	-
14A09	Griffin Creek Divide	5150	4/28	18	7.5	9.6	9.8*
13B12	Gunsight Lake	6300	5/3	111	50.4	50.9	-
14A03	Hell Roaring Divide	5770	4/30	77	37.5	38.8	31.5
13B13	Holbrook	4530	5/3	0	0.0	5.0	1.4*
14A05	Logan Creek	4300	4/28	4	1.6	4.4	3.4*
13A05	Marias Pass	5250	4/27	65	28.0	16.6	18.0
13A16	Mineral Creek	4000	5/1	39	16.7	21.0	-
13B07	North Fork Jocko	6330	4/30	112	55.0	58.1	48.0*
13B02	Spotted Bear Mountain	7000	5/3	31	14.6	16.5	12.4*
13A10	Strawberry Lake	5600	5/3	103	53.4	53.6	42.5*
13B01	Trinkus Lake	6100	5/3	104	54.4	55.2	45.4*
13B11	Twin Creeks	3580	5/3	0	0.0	9.8	1.4*
13B05	Upper Holland Lake	7000	5/3	90	45.5	46.8	39.0*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1965

SNOW COURSE			CURRENT DATA			PAST RECORD		
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT		
						LAST YEAR	AVERAGE	
	COLUMBIA RIVER BASIN							
	KOOTENAI RIVER							
1SB11	Bares Creek	5500	4/29	88	45.2	58.8	49.1	
1SB15	Bares Trail	3800	4/29	0	0.0	-	-	
1AA04	Brush Creek	5000	4/28	26	10.2	12.4	10.7*	
BC 10	Fernie	3500	4/29	7	3.1	3.8	2.8	
BC 12A	Field	4200	4/30	0	0.0	0.0	0.6*	
BC 11	Glacier	4100	4/30	45	22.6	27.8	25.9	
1AA11	Graves Creek	4300	4/30	40	16.9	-	-	
BC 43	Gray Creek	5100	4/27	53	21.9	23.0	20.2	
BC 33	Kicking Horse	5400	4/30	34	14.6	12.1	12.2	
BC 20B	Kimberley	3800	4/30	0	0.0	0.3	1.2*	
BC 32	Marble Canyon	5000	4/29	34	11.2	10.2	13.4	
BC 10B	Morrissey Ridge	6100	4/30	68	28.0	-	-	
BC 10A	New Fernie	4100	4/29	19	9.3	11.2	6.0*	
1SA01	Red Mountain	6000	4/29	52	21.9	16.6	20.9	
BC 8A	Sinclair Pass	4500	4/29	0	0.0	1.7	2.2*	
BC 20A	Sullivan Mine	5100	4/30	25	11.0	11.5	12.5	
BC 41	Upper Elk River	4400	4/26	8	3.0	3.2	2.5*	
1AA07	Wasnel Divide	5450	4/30	80	33.2	37.8	35.7*	
	FLATHEAD RIVER							
1AB03	Bascom Peak	5150	4/27	19	7.4	8.9	9.7*	
1AA1	Beaver Lake	5900	5/3	68	32.1	30.9	-	
1SB03	Big Creek	6750	4/29	119	59.8	51.6	50.5*	
1SA17	Camp Misery	6400	4/28	138	65.8	57.0	-	
1SA02	Desert Mountain	5600	4/27	43	20.6	16.5	14.6	
1SB04	Petty Creek	5900	4/29	56	26.1	22.0	-	
1AA09	Griffin Creek Divide	5150	4/28	18	7.5	9.6	9.8*	
1SB12	Quinsight Lake	6300	5/1	111	50.4	30.9	-	
1AA03	Hell Roaring Divide	5770	4/30	77	37.5	38.8	31.5	
1SB13	Holbrook	4530	5/3	0	0.0	5.0	1.4*	
1AA05	Logan Creek	4300	4/28	4	1.6	4.4	3.4*	
1SA05	Marias Pass	5250	4/27	65	28.0	16.6	18.0	
1SA16	Mineral Creek	4000	5/1	19	16.7	21.0	-	
1SB07	North Fork Jocko	6520	4/30	112	55.0	58.1	48.0*	
1SB02	Spotted Bear Mountain	7000	5/3	31	14.6	16.5	12.4*	
1SA10	Strawberry Lake	5600	5/3	103	53.4	53.6	42.5*	
1SB01	Trinkus Lake	6100	5/3	104	54.4	55.2	45.4*	
1SB11	Twin Creeks	2980	5/3	0	0.0	9.8	1.4*	
1SB05	Upper Holland Lake	7000	5/3	90	45.5	46.8	39.0*	

*NOTE: ALL AVERAGES BASED ON 1956-1962 (15 YEAR PERIOD). "ADJUSTED AVERAGE"

SNOW SURVEY DATA

AS OF MAY 1, 1965

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE
CLARK FORK RIVER							
13C13	Black Pine	7100	4/27	48	20.2	17.8	11.8*
12B10	Copper Creek	5700	4/26	35	15.6	14.6	-
12B11	Cotter Mine	6250	4/26	53	22.8	18.5	-
13B10	Coyote Hill	4200	4/30	11	5.0	5.2	2.3
13C11	Fred Burr Pass	8000	4/29	91	41.3	30.6	32.5*
14C10	Heart Lake Trail	4800	4/29	38	16.6	-	-
15C01	Hoodoo Creek	6200	4/29	114	56.6	55.2	50.2*
13C04	Intergaard	6450	4/29	24	8.4	9.0	-
15B02	Lookout	5250	4/27	82	36.6	44.3	36.4
13C21	Lubrecht Forest No. 3	5450	5/2	10	3.4	7.9	3.6*
13C22	Lubrecht Forest No. 4	4650	5/2	0	0.0	1.2	0.6*
13C08	Lubrecht Forest No. 6	4040	5/2	0	0.0	0.0	0.1*
13C12	Red Lion	7100	4/29	61	26.2	18.2	19.6*
13C03	Skalkaho Summit	7260	4/27	82	38.4	29.0	26.7*
13C02	Slide Rock Mountain	7100	4/28	50	22.3	21.8	14.7*
13C18	Spring Gulch	6000	5/2	7	3.0	11.0	3.1*
13C07	Storm Lake	7780	4/29	49	20.8	16.8	17.0*
13C01	Stuart Mountain	7400	5/2	86	38.4	36.2	30.4*
14B01	TV Mountain	6800	5/1	53	23.2	22.6	20.3*
BITTERROOT RIVER							
13C16	Ambrose	6480	4/28	38	15.4	16.5	11.0*
13D02	Gibbons Pass	7100	4/30	61	29.2	26.7	23.1
14C05	Lolo Pass	5230	4/27	74	34.8	40.8	31.8*
14C07	Lost Horse	5940	4/27	82	37.3	43.6	34.1*
14D02	Nez Perce Camp	5580	4/26	36	15.7	20.0	9.7
14D01	Nez Perce Pass	6570	4/26	45	19.8	22.6	13.3
13D22	Saddle Mountain	7940	4/30	71	33.3	-	-
14C08	Twin Lakes	6510	4/27	108	52.2	54.9	46.6*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1965

SNOW COURSE			CURRENT DATA			PAST RECORD		
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT		
						LAST YEAR	AVERAGE	
CLARK FORK RIVER								
13C13	Black Pine	7100	4/27	48	20.2	12.8	11.8*
13C10	Copper Creek	5700	4/26	35	19.6	14.6	-
13C11	Cotter Mine	6250	4/26	53	22.8	18.5	-
13B10	Dagger Mill	4200	4/30	11	5.0	5.2	2.3
13C11	Fred Burr Pass	8000	4/29	91	41.3	30.6	32.5*
13C10	Heart Lake Trail	4800	4/29	28	16.6	-	-
13C01	Hoodoo Creek	6200	4/29	114	56.6	55.2	50.2*
13C04	Intergard	6150	4/29	24	8.4	9.0	-
13B02	Lookout	5250	4/27	82	36.6	44.3	34.4
13C21	Lubrecht Forest No. 3	4450	5/2	10	3.4	7.8	3.0*
13C22	Lubrecht Forest No. 4	4880	5/2	0	0.0	1.2	0.6*
13C08	Lubrecht Forest No. 6	4040	5/2	0	0.0	0.0	0.1*
13C12	Red Lion	7100	4/29	61	26.2	14.2	19.0*
13C03	Stanley Summit	7260	4/27	88	38.4	20.0	26.7*
13C02	White Rock Mountain	7100	4/28	50	22.3	21.8	14.7*
13C18	Spring Gulch	6000	5/2	7	3.0	11.0	3.1*
13C07	Storer Lake	7780	4/29	49	20.2	16.8	17.0*
13C01	Stuart Mountain	7400	5/2	88	38.4	30.2	30.4*
13A01	TV Mountain	6800	5/1	53	23.2	22.6	20.3*
BITTERROOT RIVER							
13C16	Ambrose	6480	4/28	38	15.4	16.5	11.0*
13D02	Gibbons Pass	7100	4/30	61	29.2	26.7	23.1
14C05	Lolo Pass	5230	4/27	74	34.8	40.5	31.8*
14C07	Lost Horse	5940	4/27	82	37.3	23.6	34.1*
14D02	Nez Perce Camp	5580	4/26	36	15.7	20.0	9.7
14D01	Nez Perce Pass	6570	4/26	45	19.8	22.6	13.3
13D22	Saddle Mountain	7940	4/30	72	33.3	-	-
14C08	Twin Lakes	6510	4/27	108	52.2	54.9	46.0*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1965

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	MISSOURI RIVER BASIN						
BEAVERHEAD RIVER							
13B10	Bloody Dick	7600	4/28	37	15.2	12.3	-
12D04	Carter Creek	7400				-	-
13E22	Dad Creek Lake	8400	5/4	57	23.2	-	-
13D15	Elk Horn Springs	7800	4/29	38	15.1	9.6	8.4*
13D09	Gold Stone	8100	4/28	56	22.7	16.8	-
11E04	Lakeview Canyon	6930	4/29	44	19.2	12.1	9.5*
11E03	Lakeview Ridge	7400	4/29	38	16.7	10.1	7.3*
12E01	White Pine Ridge	8850	4/27	23	7.9	8.1	-
RUBY RIVER							
11D08	Clover Meadow	8600	4/27	60	24.0	19.8	-
12E07	Divide	7900	4/27	38	14.7	12.0	-
12E06	Notch	8500	4/27	58	21.2	16.9	-
BIG HOLE RIVER							
13D20	Abundance Lake	8800	4/27	77	32.2	21.4	-
13D19	Darkhorse Lake	8600	4/27	97	41.0	27.7	-
13D21	Foolhen	8280	4/27	67	27.3	18.8	-
13D08	Jahnke Creek	7340	4/28	24	10.0	8.6	-
JEFFERSON RIVER							
12C07	Berry Meadow	7300	4/29	24	9.1	9.4	-
12D01	Pipestone Pass	7200	4/30	14	4.9	6.7	4.4*
MADISON RIVER							
11E09	Big Springs	6500	4/29	42	21.0	18.7	-
11D07	Call Road	8050	4/27	45	15.9	14.2	-
11D06	Crockett Lake	8400	4/27	44	15.5	13.3	-
11D12	Four Mile	6900	4/27	28	10.6	-	-
11E05	Hebgen Dam	6550	4/27	24	10.8	10.3	4.8
11E10	Island Park	6315	4/29	27	11.9	10.1	-
11D11	Lower Twin	7900	4/27	76	31.2	-	-
10E02	Norris Basin	7500	5/3	24	10.1	13.2	5.5*
11E21	Potomageton Park	7150	4/30	34	17.4	-	-
11E20	Sentinel Creek	8300	4/30	79	37.2	-	-
11E08	Valley View	6500	4/29	39	18.6	16.1	-
11E07	West Yellowstone	6700	4/28	27	11.5	8.3	5.6

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1965

SNOW COURSE			CURRENT DATA				PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	LAST YEAR	AVERAGE
	MISSOURI RIVER BASIN							
	BEAVERHEAD RIVER							
12B10	Bloody Dick	7600	4/28	27	15.2	12.3	-	
12D04	Oxford Creek	7200			-	-	-	
12E22	Red Creek Lake	8400	5/4	37	-	23.2	-	
12D15	Elk Horn Springs	7400	4/20	38	15.1	9.6	8.4*	
12D09	Gold Stone	8100	4/28	56	22.7	16.8	-	
11E04	Lakeview Canyon	6930	4/29	44	19.2	12.1	9.5*	
11F03	Lakeview Ridge	7400	4/29	38	16.7	10.1	7.3*	
12E01	White Pine Ridge	8850	4/27	23	7.9	8.1	-	
	BODY RIVER							
11D08	Clover Meadow	8600	4/27	60	24.0	19.8	-	
12E07	Divide	7900	4/27	38	14.7	12.0	-	
12E06	Motch	8500	4/27	58	21.2	16.9	-	
	BIG HOLE RIVER							
12E20	Moonstone Lake	9800	4/27	77	32.4	21.4	-	
12D19	Berkshire Lake	8600	4/27	97	41.3	27.7	-	
12D21	Fuzzies	8280	4/27	67	27.3	18.4	-	
13D08	Jackie Creek	7320	4/28	24	10.0	8.6	-	
	JEFFERSON RIVER							
12C07	Berry Meadow	7300	4/29	24	9.1	9.4	-	
12D01	Pipestone Pass	7200	4/30	14	4.9	6.7	4.4*	
	MADISON RIVER							
11E09	Big Springs	6500	4/29	42	21.6	18.7	-	
11D07	Cliff Bond	8050	4/27	45	15.9	14.2	-	
11D06	Crescent Lake	8100	4/27	44	15.5	12.3	-	
11D12	Four Mile	6900	4/27	28	10.6	-	-	
11E05	Hebgen Dam	6580	4/27	24	10.8	10.3	4.8	
11E10	Island Park	6515	4/29	27	11.9	10.1	-	
11D11	Lower Twin	7500	4/27	76	31.4	-	-	
10E02	Martin Basin	7200	5/3	24	10.1	13.2	5.5*	
11E21	Potosegatan Park	7450	4/30	34	17.4	-	-	
11E20	Sentinel Creek	8300	4/30	49	37.2	-	-	
11E02	Valley View	6500	4/29	29	18.6	16.1	-	
11E07	West Yellowstone	6700	4/28	27	11.5	8.3	5.6	

NOTE: ALL AVERAGES BASED ON 1945-1964 (15 YEAR PERIOD). "AGRAMETRIC AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1965

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
GALLATIN RIVER							
10D14	Arch Falls	7350	5/1	44	16.8	15.5	-
11D09	Bear Basin	8150	4/30	64	27.9	25.2	-
10D15	Bridger Bowl	7250	4/29	77	35.2	-	-
10D04	Devil's Slide	8100	5/1	77	32.0	27.0	24.9
10D03	Hood Meadow	6600	5/1	27	10.0	12.1	6.6
11D10	Little Park	7400	4/30	50	19.0	19.4	-
11E06	Twenty-One Mile	7150	4/28	55	24.9	18.6	14.9
MISSOURI RIVER (Main Stem)							
11C01	Boulder Mountain	7950	4/27	64	23.4	-	-
12C05	Chessman Reservoir	6200	4/28	8	2.2	7.4	2.9
10C07	Elk Peak	8000	4/28	67	26.8	21.2	-
10C02	Grasshopper	7000	4/28	21	7.4	8.6	-
10C01	Kings Hill	7500	4/28	52	18.4	18.8	13.8
12C01	Stemple Pass	6600	4/27	43	14.2	14.2	9.8
12C02	Ten Mile Lower	6600	4/28	20	6.8	9.1	4.1
12C03	Ten Mile Middle	6800	4/28	41	15.0	14.5	9.9
12C04	Ten Mile Upper	8000	4/28	53	21.0	19.0	14.2
SUN-TETON-MARIAS RIVERS							
13A15	Badger Pass	6900	5/3	106	50.0	46.4	-
12B06	Cabin Creek	5200	5/3	0	0.0	0.0	-
12B09	Five Bull	5700	4/27	24	9.0	6.6	-
12A01	Freight Creek	6000	4/26	52	23.6	19.6	-
12B07	Goat Mountain	7000	4/30	42	16.0	12.6	10.3*
12B01	West Fork	6000	4/26	52	23.2	18.3	-
12B04	Wrong Creek	5700	5/3	28	14.1	17.4	-
12B03	Wrong Ridge	6800	5/3	59	30.9	25.6	-
JUDITH RIVER							
10C06	Spur Park	8000	4/29	74	29.7	27.2	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1965

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE
GALLATIN RIVER							
10D14	Arch Falls	7350	5/1	44	16.8	15.5	-
11D09	Bear Basin	8150	4/30	64	27.9	25.2	-
10D15	Bridger Bowl	7250	4/29	77	35.2	-	-
10D04	Devil's Slide	8100	5/1	77	32.0	27.0	24.9
10D03	Hood Meadow	6600	5/1	27	10.0	12.1	6.6
11D10	Little Park	7400	4/30	50	19.0	19.4	-
11E06	Twenty-One Mile	7150	4/28	55	24.9	18.6	14.9
MISSOURI RIVER (Main Stem)							
11C01	Boulder Mountain	7950	4/27	64	23.4	-	-
12C04	Cheesman Reservoir	6200	4/28	8	2.2	7.4	2.9
10C07	Elk Park	8000	4/28	67	26.8	21.2	-
10C02	Grasshopper	7000	4/28	21	7.4	8.6	-
10C01	Kings Hill	7500	4/28	52	18.4	18.8	13.8
12C01	Steeple Pass	6600	4/27	43	14.2	14.2	9.8
12C02	Ten Mile Lower	6600	4/28	20	6.8	9.1	4.1
12C03	Ten Mile Middle	6800	4/28	41	15.0	14.5	9.9
12C04	Ten Mile Upper	8000	4/28	53	21.0	19.0	14.7
SUN-TETON-MARIAS RIVERS							
12A15	Badger Pass	6900	5/3	106	50.0	46.4	-
12B06	Cabin Creek	5200	5/3	0	0.0	0.0	-
12B09	Pine Bull	5700	4/27	24	9.0	6.6	-
12A01	Freight Creek	6000	4/26	52	23.6	19.6	-
12B07	Goat Mountain	7000	4/30	42	16.0	12.6	10.3*
12B01	West Fork	6000	4/26	52	22.2	18.7	-
12B04	Wrong Creek	5700	5/3	28	14.1	17.4	-
12B07	Wrong Ridge	6800	5/3	59	30.9	25.6	-
JUDITH RIVER							
10C06	Spur Park	8000	4/29	74	29.7	27.2	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
SASKATCHEWAN RIVER							
13A03	Iceberg Lake No. 3	5600	5/4	69	34.8	39.4	29.6
13A14	Josephine Lower No. 9	4900	5/3	46	19.6	19.3	17.9*
13A07	Mount Allen No. 7	5700	5/3	96	45.6	50.8	49.2
13A06	Piegan Pass No. 6	5500	5/3	86	43.3	45.2	41.3
13A08	Ptarmigan No. 8	5800	5/4	92	46.8	46.6	40.3
UPPER YELLOWSTONE RIVER							
10C05	Bald Ridge	7500	4/28	46	18.0	-	-
9D01	Camp Senia	7890	5/3	33	10.8	15.0	9.3*
10E03	Canyon	7750	4/30	53	24.7	16.0	13.5*
10E06	East Entrance	7000	5/2	11	2.7	4.7	3.6*
9D05	Grizzly Peak	8400	4/29	68	23.8	24.8	-
10D06	Independence	8000	4/26	64	27.0	18.8	17.7*
10E04	Lake Camp	7850	4/29	36	13.4	7.0	7.2*
9E01	Lodgepole	8200	4/29	38	12.1	11.3	10.7*
10E01	Lupine Creek	7300	5/3	24	8.2	8.2	7.4*
10D12	Monument Peak	9000	4/26	94	37.3	29.6	26.4*
10D07	Northeast Entrance	7400	5/1	24	10.2	8.2	6.2
10C03	Porcupine R. S.	6500	4/28	33	11.5	-	-
10D10	Sacajawea	6550	4/29	40	17.2	17.0	10.8*
10C08	South Fork Shields	8100	4/28	86	36.4	-	-
10E05	Sylvan Pass	7100	5/1	40	15.2	11.1	10.6*
9D04	Timberline Creek	8850	5/3	65	25.2	23.8	16.7*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1965

SNOW COURSE			CURRENT DATA				PAST RECORD		
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	LAST YEAR	AVERAGE
SASKATCHEWAN RIVER								
1J20J	Icebergy Lake No. 5	5600	5/4	69	34.6	39.4	29.6	
1J21A	Josephine Lower No. 9	4900	5/3	44	19.6	19.3	17.9*	
1J20F	Mount Allen No. 7	5700	5/3	96	45.6	50.8	49.2	
1J20G	Pigeon Pass No. 6	5300	5/3	85	43.5	45.2	41.3	
1J20E	Ptarmigan No. 8	5800	5/4	92	45.8	46.6	40.3	
UPPER YELLOWSTONE RIVER								
1OC09	Bald Ridge	7500	4/28	46	18.0	-	-	
9D01	Camp Sarle	7490	5/3	33	10.5	15.0	9.3*	
1OE05	Canyon	7750	4/30	53	24.7	16.0	13.5*	
1OE06	East Entrance	7000	5/2	11	2.7	4.7	3.6*	
9D05	Grizzly Peak	8400	4/29	68	23.8	24.8	-	
1OE08	Independence	8000	4/26	54	27.0	18.5	17.7*	
1OE04	Lake Camp	7850	4/29	36	13.4	7.0	7.2*	
9E01	Lodgepole	8200	4/29	38	12.1	11.3	10.7*	
1OE01	Lupine Creek	7700	5/3	24	8.2	5.2	7.2*	
1OD12	Monument Peak	9000	4/26	64	37.3	29.6	26.4*	
1OD07	Northeast Entrance	7400	5/1	24	10.2	8.2	6.2	
1OC03	Porcupine R. S.	6500	4/28	32	11.5	-	-	
1OD10	Sacajawea	6550	4/29	40	17.2	17.0	10.8*	
1OC08	South Fork Shields	8100	4/28	86	36.4	-	-	
1OE05	Sylvan Pass	7400	5/1	40	15.2	11.1	10.5*	
9D04	Timberline Creek	8850	5/3	65	25.2	23.8	16.7*	

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SOIL MOISTURE DATA

AS OF MAY 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
	COLUMBIA RIVER BASIN							
Kootenai								
15B15M	Baree Trail	3800	48	7.5	4/20	6.7	-	-
14A10M	Murphy Lake R. S.	3000	48	22.6	5/3	23.0	-	-
15A02M	Raven R. S.	3050	48	23.0	4/29	22.0	-	-
Flathead								
13A02M	Desert Mountain	5600	54	8.4	4/27	9.6	6.8	8.2
13A05M	Marias Pass	5250	54	6.5	4/30	6.4	5.4	6.0
Clark Fork								
13C15M	Georgetown Lake	6450	48	9.0*	4/29	5.1	4.5	-
13B19M	Seeley Lake	4030	48	11.9*	5/3	12.0	11.9	-
13C02M	Skalkaho Summit	7260	48	10.8	4/27	9.7	-	-
Bitterroot								
13D18M	Gibbons Pass	7100	48	7.1	4/30	7.9	6.1	-
14C05M	Lolo Pass	5250	48	10.6*	4/27	9.4	5.5	-
	MISSOURI RIVER BASIN							
Beaverhead								
11E13M	Lakeview	6700	48	15.3	5/5	16.5	14.8	-
Madison								
10D04M	Red Bluff	4800	40	4.7	4/30	2.6	3.5	-
Gallatin								
11D02M	College Site	4856	54	14.5	4/30	13.2	12.5	12.1
11E06M	Twenty-One Mile	7150	48	8.8	4/28	3.6	3.6	-
Missouri Main Stem								
10C01M	Kings Hill	7420	48	11.8	4/29	7.8	8.2	-
12C08M	Stemple Pass	6350	48	5.9	4/29	5.3	5.6	-
Yellowstone								
10D11M	Battle Ridge	6020	48	17.6*	4/29	16.6	14.3	-
10D07M	Northeast Entrance	7350	48	9.4	4/30	7.4	8.2	-

**AVERAGE FOR PERIOD OF RECORD *Revised

SOIL MOISTURE DATA

AS OF MAY 1, 1965

(Inch

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVE
	COLUMBIA RIVER BASIN							
	Kootenai							
1S01M	Bates Trail	3800	48	7.5	4/20	6.7	-	-
1L01OM	Murphy Lake R. S.	3000	48	22.6	5/3	23.0	-	-
1S40OM	Raven R. S.	3050	48	23.0	4/29	22.0	-	-
	Flathead							
1J40OM	Desert Mountain	5600	54	8.4	4/27	9.6	6.8	8
1J40SM	Marias Pass	5250	54	6.5	4/30	6.4	5.4	6
	Clark Fork							
1J01SM	Georgetown Lake	6450	48	9.0*	4/29	5.1	4.5	-
1J01SM	Seeley Lake	4030	48	11.9*	5/3	12.0	11.9	-
1J00OM	Skalkaho Summit	7260	48	10.8	4/27	9.7	-	-
	Bitterroot							
1J01OM	Gibbons Pass	7100	48	7.1	4/30	7.9	6.1	-
1J00SM	Lolo Pass	5250	48	10.6*	4/27	9.4	5.5	-
	MISSOURI RIVER BASIN							
	Beaverhead							
1L01SM	Lakeview	6700	48	15.3	5/5	16.5	14.8	-
	Madison							
1O00OM	Red Bluff	4800	40	4.7	4/30	2.6	3.5	-
	Gallatin							
1L00OM	College Site	4850	54	14.5	4/30	13.2	12.5	12
1L00SM	Twenty-One Mile	7150	48	8.8	4/28	3.6	3.6	-
	Missouri Main Stem							
1O00OM	Kings Hill	7420	48	11.8	4/29	7.8	8.2	-
1O00SM	Stemple Pass	6350	48	5.9	4/29	5.3	5.6	-
	Yellowstone							
1O01OM	Battle Ridge	6020	48	17.6*	4/29	16.6	14.3	-
1O00YM	Northeast Entrance	7350	48	9.4	4/30	7.4	8.2	-

**AVERAGE FOR PERIOD OF RECORD *Revised

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1965

(1000 Acre Feet)

BASIN	RESERVOIR	USEABLE CAPACITY	USEABLE STORAGE THIS YEAR	USEABLE STORAGE LAST YEAR	USEABLE STORAGE AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,428.0	1,564.0	2,003.0	2,097.0**
	Flathead Lake	1,791.0	1,132.0	770.7	968.0
	Camas 1/	45.2	29.7	22.3	38.1
	Mission Valley 2/	100.3	51.0	26.5	45.1
Clark Fork	Georgetown Lake	31.0	22.0	25.5	21.2
	Noxon Rapids	334.6		101.1	-
Bitterroot	Como	34.9	24.5	8.1	17.9
	Painted Rocks	31.7		25.4	22.0**
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	225.6	108.5	-	-
	Lima	84.0	77.3	28.8	50.0**
Ruby	Ruby	38.8	-	-	31.7**
Madison	Hebgen Lake	384.8	198.8	224.6	174.8
	Ennis Lake	41.0	25.0	38.6	34.9
Gallatin	Middle Creek	8.0	4.1	5.0	4.6**
Missouri	Canyon Ferry	2,043.0	1,589.0	1,741.0	1,577.4**
	Hauser & Helena	61.9	58.4	63.0	50.1
	Lake Helena	10.4	9.2	10.9	6.6
	Holter Lake	81.9	69.0	66.2	61.8
	Smith River	10.7	11.4	9.0	8.3**
	Ackley Lake	5.8		2.8	3.9
	Durand	7.0	7.0	5.6	5.9
	Martinsdale	23.1	10.6	8.1	10.6
	Deadman's Basin	72.2	59.2	59.2	45.1**
	Fort Peck	19,410.0	15,950.0	11,920.0	11,128.6
Sun	Gibson	105.0	58.8	22.1	65.7
	Willow Creek	32.3	19.5	21.5	22.5
	Pishkun	32.0	21.1	17.0	23.5
Marias	Lower Two Medicine	16.6		2.2	0.8
	Four Horns	19.2		13.4	10.8
	Swift	30.0		14.1	26.7
	Lake Frances	112.0		37.2	95.8
	Tiber	1,313.0	815.5	632.9	656.3**
Milk	Fresno	127.2	134.9	58.4	108.1
	Nelson	66.8	40.3	26.9	39.8
	Lake Sherburne	66.1	28.7	-	24.8
Yellowstone	Mystic Lake	20.8	1.6	3.5	2.8
	Tongue River	68.0		40.5	20.4
	Cooney	27.5	11.2	23.0	15.0**

1/ Sum of four small reservoirs on west side of Flathead Lake.
2/ Sum of eight small reservoirs in Mission Valley not including Jocko Lake.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). **AVERAGE FOR PERIOD OF RECORD

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1965

(1000 acre feet)

BASIN	RESERVOIR	AVERAGE CAPACITY	USEABLE STORAGE: THIS YEAR	USEABLE STORAGE: LAST YEAR	USEABLE STORAGE: AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,424.0	1,556.0	2,003.0	2,097.0*
	Flathead Lake	1,791.0	1,132.0	770.7	948.0
	Cabinet 1/	45.2	24.7	22.3	38.1
	Milesion Valley 2/	100.3	51.0	86.5	45.1
Clark Fork	Georgetown Lake	31.0	22.0	25.5	23.2
	Noxon Rapids	334.6		101.1	-
Bitterroot	Como	34.9	24.5	8.1	17.9
	Painted Rocks	31.7		25.1	22.0*
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	225.6	108.5	-	-
	Lima	84.0	72.3	28.8	50.0*
Ruby	Ruby	38.8	-	-	31.7*
Madison	Hebgen Lake	58.2	198.8	224.6	174.8
	Ennis Lake	41.0	45.0	38.0	34.7
Gallatin	Middle Creek	8.0	4.1	5.0	4.6*
Missouri	Canyon Ferry	2,042.0	1,599.0	1,741.0	1,577.4*
	Hauser & Helena	61.9	58.4	65.0	50.1
	Lake Helena	10.4	9.2	10.9	8.6
	Holter Lake	81.9	69.0	66.2	61.8
	Smith River	10.7	11.4	9.0	8.7*
	Ackley Lake	5.8		2.8	3.9
	Durand	7.0	7.0	5.6	5.9
	Martinsdale	23.1	10.6	8.1	10.6
	Deadman's Basin	72.2	59.2	59.2	45.1*
	Fort Peck	19,410.0	15,950.0	11,920.0	13,128.6
Sun	Gibson	105.0	58.8	28.1	45.7
	Willow Creek	32.3	19.5	21.5	22.5
	Pishkun	32.0	21.1	17.0	23.5
Marias	Lower Two Medicine	16.6		2.2	0.8
	Four Horns	19.2		13.4	10.8
	Swift	30.0		14.1	26.7
	Lake Frances	112.0		37.2	95.8
	Tiber	1,313.0	815.5	632.9	656.3*
MILK	Fresno	127.2	134.9	58.4	108.1
	Nelson	66.8	40.3	26.9	39.8
	Lake Sherburne	66.1	28.7	-	24.8
Yellowstone	Myrtle Lake	20.8	1.6	3.5	2.8
	Tongue River	68.0		40.5	20.4
	Cooney	27.5	11.2	23.0	15.0*

1/ Sum of four small reservoirs on west side of Flathead lake.
2/ Sum of eight small reservoirs in Milesion Valley not including Noxon Lake.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *AVERAGE FOR PERIOD OF RECORD

Agencies Cooperating in Collecting Data Contained in this Bulletin

U. S. Forest Service
Region I, Missoula, Montana

U. S. Geological Survey
Helena, Montana

U. S. Army Corps of Engineers
Portland, Oregon
Seattle, Washington
Omaha, Nebraska

U. S. Indian Irrigation Service
St. Ignatius, Montana

U. S. Weather Bureau
Helena, Montana

U. S. Bureau of Sports Fisheries and Wildlife
Red Rock Lakes Refuge
Monida, Montana

U. S. Bureau of Reclamation
Billings, Montana
Boise, Idaho

Montana Power Company
Butte, Montana

Agricultural Experiment Station
North Montana Branch Station
Havre, Montana

State Water Conservation Board
Helena, Montana

National Park Service
Yellowstone National Park
Glacier National Park

Montana Experiment Station
Montana State College
Bozeman, Montana

Bonneville Power Administration
Portland, Oregon

Montana State University
School of Forestry
Missoula, Montana

Soil Conservation Service
Montana, Wyoming, Idaho

Soil and Water Conservation Districts
Montana Counties

Johnson Flying Service, Inc.
Missoula, Montana

Water Rights Branch, Dept. of Lands and Forests
Victoria, British Columbia

Department of Northern Affairs and National Resources
Calgary, Alberta

State Engineer
Helena, Montana

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